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ASSESSING THE CONTRIBUTIONS OF PROXIMITY TO EFFECTIVE INSTRUCTION DELIVERY

Kenneth Ross

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by

Kenneth Joseph Ross II

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Committee:

Dr. Emily R. DeFouw, Committee Chair
Dr. D. Joe Olmi
Dr. Michael Mong

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ABSTRACT

Effective instruction delivery (EID) is a component of the Compliance Training for Children (CTC) Model developed by D. Joe Olmi from the School Psychology program at the University of Southern Mississippi that is designed to increase childhood compliance to adult-delivered directives. EID has been observed to be an effective strategy for increasing compliance in children (Bellipanni et al., 2013; Derieux, 2021; Ford et al., 2001; Griffin, 2007; Wimberly, 2016). Additionally, the contributions of the individual components of EID, such as demanded eye contact (Everett et al., 2005; Faciane, 2004) and contingent praise (Everett et al., 2005), have been investigated over time regarding their contribution to the EID procedure. Proximity to the child is another component of the EID procedure that needs further research. The current study used a nonconcurrent multiple baseline design to assess the contributions of proximity to EID on child compliance across four students in general education classrooms. Results showed that EID with close proximity (i.e., within 3 ft) and distant proximity (i.e., 5 ft or more) increased levels of compliance to teacher instruction and academically engaged behavior and decreased disruptive behavior from baseline levels. Implications for applied practice and research are discussed. Additionally, limitations of the current study are offered.

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DEDICATION

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Noncompliance is one of the most reported childhood behavioral concerns by parents and teachers (Roberts et al., 2008). Student engagement in noncompliance can have a negative impact on the development of academic and social skills. Kalb and Loeber (2003) noted in their review of child disobedience and noncompliance that noncompliance is associated with childhood aggression and antisocial behavior. Additionally, Kalb and Loeber indicated a low to moderate positive correlation between noncompliance and norm-breaking behavior in older children and adolescents. Student noncompliance can also have a negative impact on the time teachers spend on academic tasks, and low compliance rates may negatively impact instructional opportunities (Matheson & Shriver, 2005). Additionally, noncompliance can be a serious behavioral concern when compliance to teacher directives is impacted (Griffin, 2007; Mandel et al., 2000). Failure to respond to teacher directives and instructions can result in subsequent misbehavior and reductions in a teacher's time engaged in instruction. Given these potential risk factors, it is important to provide teachers with classroom management strategies to address noncompliance.

Compliance to teacher directives is an important student behavior resulting in increased student engagement with academic tasks (Metheson & Shriver, 2005). The definition of compliance varies across studies, with different interpretations of compliance such as criteria for compliance and time allotted for the initiation of compliance-related behaviors by the child (Marion, 1983). Compliance can be defined as when a child initiates behavior associated with an adult instruction within a certain

amount of time after the instruction has been issued (Wruble et al., 1991). Ducharme and Shecter (2011) defined compliance as "the willingness of a child to adhere to the requests and instructions of authority figures" (p. 262) and indicated that child compliance is essential and the key to success in the home and school environments.

Addressing Student Noncompliance with Multi-Tiered Supports

Interventions and supports for increasing compliance in the school setting can be addressed through implementation of an integrated multi-tiered system of supports (MTSS) in schools (McIntosh & Goodman, 2016). MTSS utilizes a three-tiered system emphasizing differing levels of academic and behavior supports for students. Tier 1 services are universal, evidence-based, schoolwide supports that are available to all students, which include but are not limited to preventative activities such as universal screening for detection, schoolwide classroom management strategies, and stated expectations. Tier 2 services are provided when additional structure/support are needed to support students who may be experiencing academic/behavioral challenges and who are not responding to Tier 1 efforts. Tier 2 supports are typically implemented in a group setting delivered by classroom teachers in which students who are displaying similar behavioral concerns may benefit from the same interventions (Anderson & Borgmeier, 2010). If the student does not respond to Tier 2 services to desired levels in the general education classroom, Tier 3 supports may be provided. At this level, more intensive and individualized interventions and supports are implemented to address a student's academic and/or behavioral concerns. Positive Behavioral Interventions and Supports (PBIS) is the system delivered under the umbrella of MTSS to address

behavioral/emotional issues, while Response to Intervention (RtI) is designed to address academic concerns (Tichá, & Abery, 2018).

In a Tier 1 behavior framework, educators teach and model schoolwide behavioral expectations to students and provide reinforcement/acknowledgement for students engaging in and exceeding schoolwide behavioral expectations (McDaniel et al., 2015). Teachers then implement Tier 2 behavioral interventions with students who are not meeting schoolwide behavioral expectations. Teachers may examine attendance, academic, office discipline referral, and universal screening data to indicate whether Tier 2 interventions are necessary for a student and then select a Tier 2 intervention which matches the specific behavioral and/or emotional difficulties of the student. Examples of Tier 2 interventions implemented by teachers in a PBIS framework include Check-In/Check-out, cognitive behavioral therapy strategies (such as Coping Cat), and social skills instruction. Students who fail to respond to Tier 2 interventions may require a more intensive individualized Tier 3 intervention. For example, individual function-based intervention plans may be delivered for a student at Tier 3. Developing a Tier 3 intervention is a resource-intensive process which requires multiple data collection methods across multiple stakeholders. To be effective, school personnel should ensure the fidelity of Tier 1 and Tier 2 supports prior to implementing Tier 3 strategies.

The goal of implementing Tier 1 behavior management strategies is serve as a preventative framework to address challenging behavior (Tichá & Abery, 2018). However, teachers may not have the experience or training to implement preventative behavior management strategies, as teachers tend to receive inadequate classroom behavior management training prior to beginning their careers (Freeman et al., 2014;

O'Handley et al., 2020). Additionally, instances of student noncompliance are often addressed utilizing aversive behavior management strategies, such as exclusionary time-out and verbal reprimands (Belfiore et al., 2008). These behavior management strategies are reactive to student noncompliance and do not modify teacher instructional variables that may decrease the likelihood of noncompliance occurring. Given these concerns, it is important to identify evidence-based, robust preventative interventions and strategies that are easy to implement and that teachers can use in school settings to address student noncompliance. One such antecedent behavioral strategy that could be utilized by teachers to address student noncompliance and disruptive behavior is proximity control.

Proximity Control as an Antecedent Strategy

Studies have observed the effect of proximity control, or physical distance from a student, as an antecedent variable on student behavior in the classroom setting. For example, Etscheidt et al. (1984) conducted a case study of proximity control as an antecedent strategy with a 10-year-old White male identified as having significant disruptive behaviors. The researchers evaluated teacher proximity, defined as the teacher being within 3 ft of the target student for at least 30 s, and its effect on target student disruptive responses, defined as off-task behaviors that interrupted the on-task behavior of one or more students in the classroom. Results indicated that the target student engaged in fewer disruptive responses when the teacher was in close proximity (2.58 disruptions per minute) compared to when the teacher was not in close proximity (0.51 disruptions per minute). This study was limited in methodology, as the researchers anecdotally recorded instances of disruptive responses and proximity and did not attempt to control for or manipulate proximity as a variable.

Additionally, the effects of proximity on students' academically engaged classroom (AEB) behavior have been investigated with children with autism placed in a general education classroom (Conroy et al., 2004). Specifically, this descriptive study included six participants ages 5-7 diagnosed with autism that were engaged in problem behaviors who were placed in a general education setting for at least 50% of the school day. Adult proximity was the independent variable, defined as being within arm's length of the target student for at least 3 s and being farther away than arm's length from the target student for at least 3 s respectively. The rate of challenging behaviors for three of the six participants increased with the absence of adult proximity, with rates of inappropriate vocalizations ranging from 0.14 to 0.95 with adult proximity compared to 1.1 to 1.59 without adult proximity. However, one of the students exhibited an increase in one of their targeted behaviors (i.e., disruptive behavior) with adult proximity, with rates of disruptive behaviors being 0.11 with adult proximity compared to 0.03 without adult proximity. Adult proximity had no effect on the rate of challenging behaviors for three of the participants. Additionally, rate of engagement, which was defined as the participant exhibiting AEB (e.g., manipulating work materials, facing the direction of the instructor), increased for five of the six participants when an adult was within arm's length of the student as compared to no adult proximity. The results of this study, however, should be interpreted with caution, as this study reported anecdotal records of behavioral data and did not manipulate proximity as a variable in the study.

Werts et al. (2001) evaluated the effects of paraprofessional proximity on academic engagement of primary-aged students with disabilities. Participants were three primary grade students with disabilities identified under IDEA and paraprofessionals

serving those students in general education classrooms. A multi-element alternating treatments design was utilized to examine the effects of the paraprofessional's proximity on a student's academic engagement. Close proximity was defined as being within 2 ft of the student, with distant proximity defined as being more than 5 ft away from the student. Examination of the results indicated that academic engagement was higher and the percent of non-engagement was lower when paraprofessionals were in close proximity of the student as compared to being at a distant proximity of the student. Although specific data were not provided, visual inspection of the graphs indicated that the percentage of intervals engaged was approximately 82% in close proximity as compared to 60% in distant proximity for participant 1, approximately 88% in close proximity as compared to 70% in distant proximity for participant 2, and approximately 60% in close proximity as compared to 30% in distant proximity for participant 3. Effect sizes measuring the difference in effect between engagement in close and distant proximity were calculated by subtracting mean scores of student engagement during an interval by mean scores of student non-engagement during an interval and dividing that value by the standard deviation of the engagement scores. The effect size of the three participants was 1.37, 1.43, and 1.45 respectively, which indicates a large effect for all three participants.

While the aforementioned studies have laid a foundation for the effect of proximity on child/student behavior, limitations were present due to a lack of rigorous, single-case research design methodology, which emphasize the need for studies that assess proximity as a variable. The current study contributed to the literature related to proximity and its contribution to effective instruction delivery.

Effective Instruction Delivery, Proximity, and Child Behavior

In addition to its effects on general behavior, proximity control as an instructional component has been studied during parent-child interactions (Hudson & Blane. 1985). Hudson and Blane examined the non-verbal elements of instruction delivery, including proximity from child, body orientation of parent, eye contact, tone of voice, and parent orientation towards object of interest. Successful instructions were defined as directing the child to engage in three specific play activities for a duration of approximately three minutes for each activity. Eight clinic and eight non-clinic mother-child pairs were observed, and results indicated that for the proximity component, compliance to adult directives occurred the most when instructions were delivered in closer proximity to the child (i.e., less than 3 ft as compared to 3-6 ft and more than 6 ft). The study was limited in its scope, as the researchers observed non-verbal elements, but did not directly manipulate these elements to assess their direct effect on instruction. The effects of proximity control on compliance to adult directives are further evaluated and utilized as a part of an antecedent compliance package known as effective instruction delivery.

Effective instruction delivery (EID), a component of the Compliance Training for Children (CTC) Model developed by D. Joe Olmi from the School Psychology program at the University of Southern Mississippi, is designed to increase childhood compliance to adult-delivered directives. The program in general is grounded in contingency management and antecedent/consequent manipulations. There are several studies that have assessed the effectiveness of EID procedures on child compliance. Those studies are noted in Table 1. A meta-analysis reviewing the effects of the CTC model and its components has recently been conducted by Derieux (2021). Derieux found small to

large effect sizes (range=-0.11-0.87) across studies that utilized EID procedures, indicating that it is effective for the treatment of child noncompliance. Radley and Dart (2016) labeled antecedent interventions that manipulate command forms, such as EID, as "probably efficacious" treatments based on a systematic review of antecedent strategies for child compliance. Additionally, EID has been shown to be effective in increasing child compliance above baseline levels in school settings across multiple studies. (Bellipanni et al., 2013; Ford et al., 2001; Griffin, 2007; Wimberly, 2016).

Ford et al. (2001) was the first study to use/define the term *Effective Instruction Delivery* and to utilize the procedure for achieving compliance with children. The components of EID included (a) delivering the instruction in close proximity (i.e., within 5 ft), (b) demanding eye contact from the student (i.e., "Look at me"), (c) delivering behavior specific praise contingent on demanded eye contact, (d) delivering the instruction as a directive (i.e., clear description of expectations) (e) delivering the instruction in descriptive terms (i.e., specific), (f) allowing a 5-sec latency period for student compliance to instruction to occur, and (g) delivering contingent praise following compliance to the instruction (Derieux, 2021).

Table 1. *Empirical Investigations using the USM Compliance Training for Children (CTC) Model (Derieux, 2021)*

Author(s)	**Population and Setting**	**CTC Components Investigated**
*Marlow (1994) Published in *Child & Family Behavior Therapy*: Marlow, Tingstrom et al. (1997)	Preschooler with speech and language delays; School based	TI and TO

Table 1 Continued

Marlow, 1996	Preschool (typically developing); School based	TI and TO
Olmi et al. (1997)	Preschool- Elementary (severe language disabilities, moderate MD, CP); School and home Based	TI and TO
*Ford (1997) Published in *School Psychology Quarterly*: Ford et al. (2001)	Elementary (typically developing); School based	EDI, TI, TO
*Mandal (1999) Published in *Child & Family Behavior Therapy*: Mandal et al. (2000)	Preschool (severe language delays, mild MD, typically developing); Clinic based	EID and TI
Benoit (2000)	Preschool-Elementary (typically developing, speech-language delay, LD); Clinic and home based	EID and TI
*Benoit (2001) Published in Child & Family Behavior Therapy: Benoit et al. (2001)	Preschool – Elementary (typical development, Down syndrome, speech-language delay, Gifted); Clinic and home based	EID and TI
Faciane (2001)	Preschool; Clinic based	Eye contact with and without praise, No eye contact
Levering (2001)	Preschool – Elementary (typically developing); Clinic based	EID and TI
Mandal (2001)	Preschool (typically developing, moderate language delay, language difficulties, severe expressive language deficits); Clinic Based	TI, CP, EID

Table 1 Continued

*Bellipanni (2003) Published in Behavior Modification: Bellipanni et al. (2013)	Elementary (general and special education); School based	EID, TI, CP
*Everett (2003) Published in Education and Treatment of Children: Everett et al. (2005)	Preschool and Elementary (ADHD, typically developing); Clinic based	Eye contact/no eye contract, direct commands/indirect commands, CP
Faciane (2003)	Preschool; Clinic based	Eye contact, no eye contact
*Roberts (2003) Published in Behavior Modification: Roberts et al. (2008)	Preschool and Elementary (typically developing, DD); Clinic based	EID, TI, CP
Bellipanni (2005)	Preschool (DD, Down syndrome, speech-language delay); School based	CP, TI, EID, TO
Roberts (2005)	Preschool and Elementary (typically developing, Down syndrome, speech-language delay); Clinic based	CP, TI, EID, TO
Scoggins (2005)	Preschool (general education and special education); school based	EID and CP
*Everett (2006) Published in Behavior Modification: Everett et al. (2007)	Preschool and Elementary (typically developing); Clinic based	TO, TO-EE (with and without escape extinction)
Griffin (2007)	Elementary (general education and special education); School based	EID, CP, Proximity
Needelman, J.L. (2008)	Elementary (typically developing); School based	TO, TO-EE
Benshoof (2010)	Preschool (ADHD, typically developing); Clinic based	TO, TO-EE
Needelman, J.L. (2010)	Elementary (typically developing); School based	TO, TO-EE

Table 1 Continued

Needelman, L.L. (2010)	Elementary age (Hearing Impaired or Deaf); Residential school based	EID, CP, TO
Benshoof (2012)	Preschool-Elementary (ASD, typical development); Clinic based	TO-EE
Wimberly (2016)	Preschool (typically developing); School based	EID

Note: An asterisk (*) indicates theses or dissertations that were published. Components investigated included TI = time-in, TO = time-out, EID = effective instruction delivery, TO-EE = time-out- escape extinction, CP = contingent praise.

The contributions of the individual components of EID have been analyzed over time in regards to their contributions to the compliance training procedure. Faciane (2004) investigated the effects of eye contact on compliance within the EID procedure with children referred a university behavioral therapy clinic for noncompliance. Compliance was defined as initiating a behavior within 5 s of the termination of a direct command, and eye contact was defined as the participant orienting their head towards an adult with their eyes forward. The effects of eye contact on compliance were measured utilizing an alternating treatments design in which the participant alternated between an eye contact condition and no eye contact condition. An independent verification datum was collected for the most effective treatment condition, which was determined based on the condition with the highest percentage of PND. Results were variable, as there was considerable overlap between baseline and treatment conditions. Additionally, there was not a significant difference in treatment effects between the eye contact and no eye contact conditions. These findings suggest that eye contact may not significantly affect child compliance as a component of the compliance training procedure. This finding was contrary to all the cited studies in Table 1 that addressed demanded eye contact.

The contribution of demanded eye contact and contingent praise to the EID procedure were investigated by Everett et al. (2005), who evaluated the effects of the addition of eye contact and contingent praise on compliance with four children. Experimental phases included direct instruction in which the parents issued commands meeting component criteria of EID (close proximity, descriptive, and 5-s latency period for response to occur), direct instruction with demanded eye contact, and direct instruction with demanded eye contact and contingent praise following compliance to parental instruction. Results indicated that mean compliance increased with each subsequent phase from baseline, with direct instruction with demanded eye contact and contingent praise yielding the highest levels of compliance. Additionally, these findings suggested that demanded eye contact alone can lead to increases in compliance, which are contrary to Faciane (2004).

Proximity to the child is another standard component of EID; however, it is a component that needs further investigation. Specifically, Derieux (2021) indicated that the majority of the studies reviewed instructed participants to be in close proximity (i.e., 3-5 ft to the child) as a component of EID (Bellipanni et al., 2013; Ford et al., 2001; Mandal et al., 2000; Roberts et al., 2008; Wimberly, 2016). However, Derieux noted Griffin (2007) was the only study that attempted to investigate the contributions of proximity as a component of EID.

Griffin (2007) investigated the effects of teacher instruction type (i.e., directive and question) and the addition of contingent praise on levels of compliance within the EID procedure in the school setting. This study also evaluated the relative effects of close (i.e., within 5 ft) and distant (i.e., greater than 10 ft) proximity on compliance. The

participants were four students referred to a university behavioral health clinic by teachers for noncompliance. Prior to the intervention, students had baseline levels of compliance below 40%. All four students were African-American; two of the students were male, and two of the students were female; two of the students were receiving special education services with classifications of Mild Intellectual Disability and Specific Learning Disability in Reading respectively; and two of the students were typically developing students with no special education ruling.

Compliance to a teacher's initial instruction was designated as the dependent variable of the study, with noncompliance being defined as failure to engage in compliance within five s of a teacher's initial delivery of the instruction (Griffin, 2007). Teachers included in the study showed usage of all components of EID at levels of below 50%. Additionally, contingent praise was used at levels below 50% by teachers included in the study. A multiple baseline across participants design was utilized to measure the effects of the primary question of the study, directive versus question instruction type. Participants were randomly assigned into one of two pair groups. One pair of participants received instructions in close (i.e., within 5 ft) proximity and the other pair received instructions from distant (i.e., greater than 10 ft) proximity.

Results indicated that compliance levels of students whose teachers were in close proximity were higher in every intervention phase than the compliance levels of students whose teacher was at a distant proximity (Griffin, 2007). Mean compliance of participants whose teachers delivered instructions in close proximity were 36% and 39% in baseline. Mean compliance levels increased in the following phases, ranging from 59% to 93% and 76% to 100% across intervention phases for the two participants,

respectively. Mean compliance of participants whose teachers delivered instructions from distant proximity was 24% for both participants in baseline. Both participants exhibited increased levels of compliance in the following phases, although data were variable for both participants across intervention phases, ranging from 30% to 70% and 20% to 70% for both participants in the following conditions Mean compliance levels for participants in the final intervention phase (i.e., EID with directives with the addition of contingent praise) were 80% and 85% respectively. It must be noted that integrity data for teachers trained to give instructions at a distant proximity was low throughout the intervention phases, ranging from 14% to 49%, which indicated that the teachers would frequently be closer than 10 ft while delivering instructions during intervention phases. This low integrity was noted to be due to a lack of experimental manipulation of proximity, which the current study aimed to address.

Purpose of the Current Study

EID has been shown to be an effective strategy for increasing compliance in children (Bellipanni et al., 2013; Derieux, 2021; Ford et al., 2001; Griffin, 2007; Wimberly, 2016); however, there are additional components of EID that warrant further study. Specifically, as noted by Derieux (2021), there is a dearth of compliance training studies that have manipulated proximity as a component of EID when used within a classroom. The current study aimed to examine the contributions of proximity to EID when used by teachers with students in classroom settings. Griffin (2007) found that compliance levels were higher when teachers were in close proximity of the student, albeit with low treatment integrity in conditions in which the teacher was at a distant proximity from the student. More specifically, the current study attempted to address the

design shortcomings of Griffin (2007) by ensuring high treatment integrity within conditions and focusing on proximity as a component of EID. It was hypothesized that the implementation of EID in close proximity (i.e., within 3 ft; Griffin et al., 2007) would demonstrate higher levels of compliance and student behavior than the implementation of EID in distant proximity (i.e., 5 ft or more; Werts et al., 2001). The following research questions were evaluated in the current study:

1. **Research Question 1**: Will the implementation of EID in close proximity (i.e., within 3 ft) have an effect on student compliance levels in a classroom setting?
2. **Research Question 2**: Will the implementation of EID in distant proximity (i.e., 5 ft or more) have an effect on student compliance levels in a classroom setting?
3. **Research Question 3**: Will the implementation of EID in close proximity (i.e., within 3 ft) have an effect on student levels of academically engaged behavior (AEB) in a classroom setting?
4. **Research Question 4:** Will the implementation of EID in distant proximity (i.e., 5 ft or more) have an effect on student levels of AEB in a classroom setting?
5. **Research Question 5**: Will the implementation of EID in close proximity (i.e., within 3 ft) have an effect on student levels of disruptive behavior (DB) in a classroom setting?
6. **Research Question 6**: Will the implementation of EID in distant proximity (i.e., 5 ft or more) have an effect on student levels of DB in a classroom setting?
7. **Research Question 7:** Will the teacher participants report the implementation of EID as a socially valid intervention?

CHAPTER II – METHODS

Participants and Setting

Recruitment of participants commenced once approval from The University of Southern Mississippi Institutional Review Board was obtained (Appendix A). Participants consisted of four student-teacher pairs. Student participants were elementary-middle school students currently enrolled in kindergarten through eighth grades in a rural school district in the southeastern United States. In order to be included in the study, students were referred by teachers or administrators for demonstrating low levels of compliance to teacher directives. Classroom observations were conducted to assess the student's level of compliance. Students were included in the study if baseline compliance levels were below 60% (Forehand, 1977). Exclusionary criteria included students with hearing impairments, autism spectrum disorders, or intellectual and developmental disabilities. Parent consent for children to participate in the study (Appendix B) and teacher consent (Appendix C) were obtained before the start of the study.

The following participant names are randomly chosen pseudonyms to ensure participant anonymity. The first participant, Luke, was an African-American male student in the 3rd grade. Luke's mean baseline compliance level to initial instructions was 72.5% (*SD*=7.1, range=60%-90%). His teacher was a White female with a master's degree who reported 8 years of teaching experience and no previous experience with behavioral interventions. Luke's mean baseline compliance level to initial instructions was higher than 60%, but he was included in the study due to consents not being received for two potential participants who were referred for demonstrating low levels of compliance to teacher directives. The second participant, Ben, was an African-American kindergarten

male with a mean baseline compliance level to initial instructions of 55% (*SD*=12.25, range=40%-70%). His teacher was a White female with a master's degree who reported 23 years of teaching experience and no previous experience with behavioral interventions. The third participant, Cody, was an African-American male student in the 3rd grade. His mean baseline compliance level to initial instruction was 52.5% (*SD*=17.08, range=30%-70%). Cody's teacher was an African-American female with a bachelor's degree who was in her first year of teaching with no previous experience with behavioral interventions. The fourth participant, Raven, was an African-American female student in the 5th grade. Her mean baseline compliance level to initial instructions was 48.33% (*SD*=14.72, range=20%-60%). Her teacher was an African-American female with a specialist degree who reported 8 years of teaching experience, with previous experience with a behavior intervention focused on increasing positive statements and decreasing negative statements in the classroom. At the time of the current study, Luke, Cody, and Raven were receiving special education accommodations under the IDEA ruling of specific learning disability (SLD).

Instruments and Materials

Training Protocols and Integrity Forms

Two EID protocols (i.e., close proximity and distant proximity) were developed for teacher trainings (see Appendix D and E). In addition, two EID integrity checklists were developed for use by the observers (See Appendix F and G). The integrity checklists included all components of EID. Additionally, observers coded whether student compliance occurred after teacher instruction on the forms. The two integrity

checklists differed on the proximity component of EID (i.e., close proximity and distant proximity).

MotivAider®

A MotivAider® is an electronic device that emits tactile prompts (i.e., vibrations) to the user. The device is typically placed in one's pocket or belt and delivers tactile prompts on an adjustable fixed time interval. Teachers were provided a MotivAider® device to wear during observations and were notified the researcher of when the device was first activated to signal the start of an observation. The MotivAider® emitted a tactile vibration for approximately 2 to 3 s every 2 minutes to prompt the teacher to deliver direct instructions. Teachers were prompted by the observer to deliver a direct instruction if the teacher failed to do so 1 minute after being prompted by the MotivAider®.

Usage Rating Profile-Intervention Revised (URP-IR)

The Usage Rating Profile-Intervention Revised (URP-IR; Briesch et al., 2013) was completed by teachers in the present study to determine the social acceptability and feasibility of EID for addressing child noncompliance. The Acceptability subscale of the URP-IR demonstrated very high levels of internal consistency ($\alpha = .95$); the Feasibility ($\alpha = .88$) and System Climate ($\alpha = .91$) subscales demonstrated high internal consistency; the Understanding ($\alpha = .79$) and Family-School ($\alpha = .78$) subscales demonstrated acceptable internal consistency; and the System Support ($\alpha = .67$) subscale demonstrated a lower level of internal consistency relative to the other subscales. The URP-IR demonstrated an acceptable model fit, χ^2 (74) = 383.63, $\chi^2/df = 5.18$; RMSEA = .09, CFI = .96, SRMR = .05, and all factor loadings of the subscales were statistically significant.

Dependent Variables and Data Analysis

Percentage of student compliance to teacher's initial instruction was the dependent variable of this study. Percentage of student compliance was calculated by dividing the number of instructions to which the child complied with within 5-secs of the delivery by the total number of instructions given and then multiplying that value by 100%. A minimum of 10 teacher directives was required for each observation.

Percentage of student AEB and DB served as additional variables of this study. AEB was defined as the student appropriately engaging in academic tasks in the classroom. Examples of AEB included the student directing their attention towards the task or towards the teacher (e.g., oriented towards writing assignment and/or reading materials, attending to the teacher while they are speaking and/or instructing the class) and the student engaging with materials related to the current task (e.g., appropriate writing). DB was defined as noncompliance with the teacher directives and engaging in behaviors not related to the current task demand. Examples of DB included noncompliance to teacher instruction, sleeping, staring off, orienting attention or body away from the current task demand or teacher, inappropriate vocalizations (e.g., talking out loud, speaking to the teacher or to other students about content not related to the current task demand, humming), playing with objects (e.g., manipulating objects in a manner that is not consistent with the current task demand, playing with hair, playing with a pencil, writing or drawing material unrelated to the current task demand, using computer in a manner that is not consistent with the current task demand), inappropriate touching of the teacher or other students, and out of seat behavior without permission from the teacher. The occurrence of DB was observed in 10-s intervals using partial

interval recording, in which the occurrence of behavior was recorded if the student engaged in the behavior at any point during the 10-s interval. The occurrence of AEB was observed in 10-s intervals using momentary-time sampling (MTS), in which the occurrence of the behavior was recorded if the student engaged in the behavior at the end of the 10-s interval. Observers utilized a visual prompt (i.e., color change on screen at the end of a 10-s interval) to signal when to record the occurrence of AEB.

Results were interpreted utilizing visual analysis of the data's level, trend, variability, overlap, and immediacy of effect (Horner et al., 2005). To evaluate the effect of the EID procedure, levels of student compliance in intervention phases were compared to baseline. Additionally, levels of student compliance across proximity conditions (i.e., close proximity and distant proximity) were compared to assess for the contributions of proximity as a variable in the EID procedure.

The effect size of the data was calculated using Tau-U, an effect size strong enough for small sample sizes that accounts for trend issues (Vannest & Ninci, 2015). In Tau-U, an improvement of 0.20 is considered a small effect, 0.20 to 0.60 is considered a moderate effect, 0.60 to 0.80 is considered a large effect, and greater than 0.80 is considered a large to very large effect. Vannest et al.'s (2016) web-based calculator for Tau-U was utilized to conduct the effect size analysis.

Experimental Design

A nonconcurrent multiple baseline design across two pairs of participants (Cooper et al., 2019) was utilized to evaluate the effects of proximity when teachers are engaged in EID. A multiple baseline design allowed the researcher to assess the effects of EID on the behavioral targets without having to withdraw the procedure. Additionally, a

nonconcurrent design allowed the investigators to deliver intervention services to a participant without needing to rely on the progression of the other participant(s). Adapted from Griffin (2007), participants were randomly assigned to two conditions: close proximity, defined as delivering instructions within 3 ft of the student, and distant proximity, defined as delivering instructions 5 ft or more from the student. This process of randomly assigning two participants to the close proximity condition and two participants to the distant proximity condition was done to account for potential order and carry-over effects.

Procedures

Data Collection Procedures

Data collectors consisted of doctoral-level school psychology program graduate students from The University of Southern Mississippi. The graduate students were trained on the use of EID integrity forms (see Appendix F and G) by the principal investigator and were required to demonstrate 90% inter-observer agreement or higher with the principal investigator. The principal investigator trained graduate students using verbal instructions and provided examples and non-examples of instructions adhering to the EID procedure. Additionally, graduate students were trained on collecting student behavioral (i.e., AEB and DB) data (see Appendix H). Graduate students were verbally instructed on examples and non-examples of AEB and DB before conducting observations. The graduate students were required to demonstrate 90% inter-observer agreement (IOA) or higher with student behavior observations.

Baseline

Students were randomly assigned into pairs prior to baseline. One pair of students was randomly assigned to the EID with close proximity condition and the other pair of students was placed in the EID with distant proximity condition. Baseline data were collected non-concurrently for the pairs of students. Once baseline data were stable, an intervention phase was implemented for that participant.

Baseline data of the percentage of teacher directives adhering to EID standards, the percentage of student compliance to directives, and the percentages of the occurrence of AEB and DB were collected in the current study. Teachers were provided a MotivAider® device and were instructed to provide direct instructions as they usually do. Before the first baseline session, all teachers were prompted to adhere to an allocated distance based on what condition the teachers were assigned (i.e., close vs distant proximity) and were instructed to deliver instructions in an appropriate tone of voice in regards to the allocated distance they are given to deliver instructions. These instructions were not delivered before subsequent baseline sessions. The duration of the session was 20 minutes or after the delivery of 10 directives, and teachers were prompted by the MotivAider® device to deliver direct instructions every 2 minutes to cue the delivery of a directive. To ensure that teachers would deliver an appropriate number of directives, teachers were prompted by the observer to deliver a direct instruction if the teacher failed to do so 1 minute after being prompted by the MotivAider®.

Graduate students recorded instances of instruction delivery and student compliance utilizing a procedural observation form. The observers assessed if the instruction given by the teacher met EID standards, as defined by the following

components of EID: (a) delivering the instruction in close proximity (i.e., within 3 ft) or distant proximity (i.e., 5 ft or more), (b) demanding eye contact from the student (i.e., "look at me"), (c) delivering behavior specific praise contingent on demanded eye contact, (d) delivering the instruction as a directive (i.e., clear description of expectations) (e) delivering the instruction in descriptive terms (i.e., specific), (f) allowing a 5-sec latency period for student compliance to instruction to occur, and (g) delivering contingent praise following compliance to an instruction.

Teacher Training

Teachers were trained on the use and components of EID before the first intervention phase. Adapted from Ford et al. (2001), verbal and written instructions (see Appendix D and E), modeling, and performance feedback were used to train teachers on the delivery of intervention procedures. Teachers were instructed to deliver EID in close (i.e., within 3 ft) or distant (i.e., 5 ft or more) depending on what condition the participants were randomly assigned to. The principal investigator selected an object in each classroom (e.g., a particular student's desk or table) for the teachers to utilize as a physical prompt to indicate that they are in close or distant proximity of the student (e.g., if a teacher is assigned to the distant proximity condition, the principal investigator selected another student's desk in the classroom 5 ft or more from the target student for the teacher to use as a physical prompt to measure their distance from the target student). The principal investigator utilized a teacher training procedural integrity form to ensure that consistent training procedures were followed (see Appendix I). The principal investigator completed 100% of teacher training steps for trainings and re-trainings across phases. During a debriefing session following the completion of the study, the

principal investigator coached teachers in the distant proximity condition on how EID is typically delivered (i.e., delivering instructions in close proximity to the student).

EID with Close or Distant Proximity

Teachers were provided a MotivAider® and instructed to administer at least 10 instructions while implementing EID. The duration of the session was 20 minutes or until 10 directives had been delivered. Adapted from recent studies that investigated EID (Bellipanni et al., 2013; Derieux, 2021; Wimberly, 2016), the current study operationally defined EID with the following components: (a) demanding eye contact from the student (i.e., "look at me"), (b) delivering behavior specific praise contingent on demanded eye contact, (c) delivering the instruction as a directive (i.e., clear description of expectations) (d) delivering the instruction in descriptive terms (i.e., specific), (e) allowing a 5-sec latency period for student compliance to instruction to occur, and (f) delivering contingent praise following compliance to instruction. Teachers were trained to redeliver the instruction if the student did not comply with the instruction following the 5-sec latency period. Teachers were instructed to manage the students' noncompliance as they typically would if the student failed to comply following the 5-sec latency period after the teacher redelivered the initial instruction. Additionally, teachers were prompted before each session to deliver their instruction in close proximity (within 3 ft of the student) or distant proximity (5 ft or more from the student), and were instructed to manage student noncompliance as typically done. Anecdotally, Luke and Raven's teachers tended to deliver instructions to prompt their students to engage with an academic task demand (e.g., "Raven, continue working on the first part of your worksheet"), and Cody and Ben's teachers tended to deliver instructions to prompt their students to adhere to a

classroom behavioral expectation (e.g., “Place your hands in your lap and pay attention, Cody”). Teachers were retrained on the implementation of EID procedures before the next intervention session if treatment integrity fell below 80% during a session.

Interobserver Agreement and Treatment Integrity

IOA was assessed by dividing the observer agreements on the occurrences of student compliance and student noncompliance by the total number of agreements and disagreements and multiplied by 100%. For IOA, a second data collector observed occurrences of student compliance and noncompliance independent of the primary data collector. The principal investigator trained secondary data collectors on the operational definitions of the dependent variables and the procedural steps of the EID procedure. The secondary data collectors were required to reach 90% IOA with the principal investigator in order to be included as an IOA data collector. If a secondary data collector failed to reach the 90% criterion at any point in the current study, the principal investigator re-trained the secondary data collector on the operational definitions and procedures of the current study and performed a training observation to reach 90% IOA with the secondary data collector. IOA was evaluated for 26.83% across all sessions. Average IOA for AEB was 94.81% (*SD*=0.05, range=85%-100%) across sessions and average IOA for DB was 95.08% (*SD*=84.17%-100%, range=84.17%-100%) across sessions.

Treatment integrity data were collected for every observation throughout intervention conditions. Treatment integrity was measured using an EID component checklist. If treatment integrity for EID components fell below 80%, teachers were retrained on the implementation of EID procedures before the next session. The principal investigator retrained Luke’s teacher after 3 intervention sessions, Cody’s teacher after 2

intervention sessions, and Raven's teacher after 3 intervention sessions. Treatment integrity remained above 80% during all intervention sessions for Ben's teacher. The percentage of teachers' use of EID components when delivering instructions was calculated by the number of EID components used in the instruction divided by the total possible number of EID components and multiplying it by 100%. The percentage of usage of specific EID components was calculated by dividing the number of the specific EID components used by the total number of instructions issued and multiplying it by 100%. The percentage of proximity integrity was calculated by dividing the number of proximity procedures followed by the total number of instructions issued and multiplying it by 100%. A secondary data collector collected treatment integrity data across 26.83% of sessions. Average IOA for treatment integrity was 100% across all sessions.

Treatment Acceptability

Teachers were asked complete the URP-IR following the conclusion of the study to determine if teachers found EID to be an acceptable and feasible intervention for child noncompliance (Chafouleas et al., 2011).

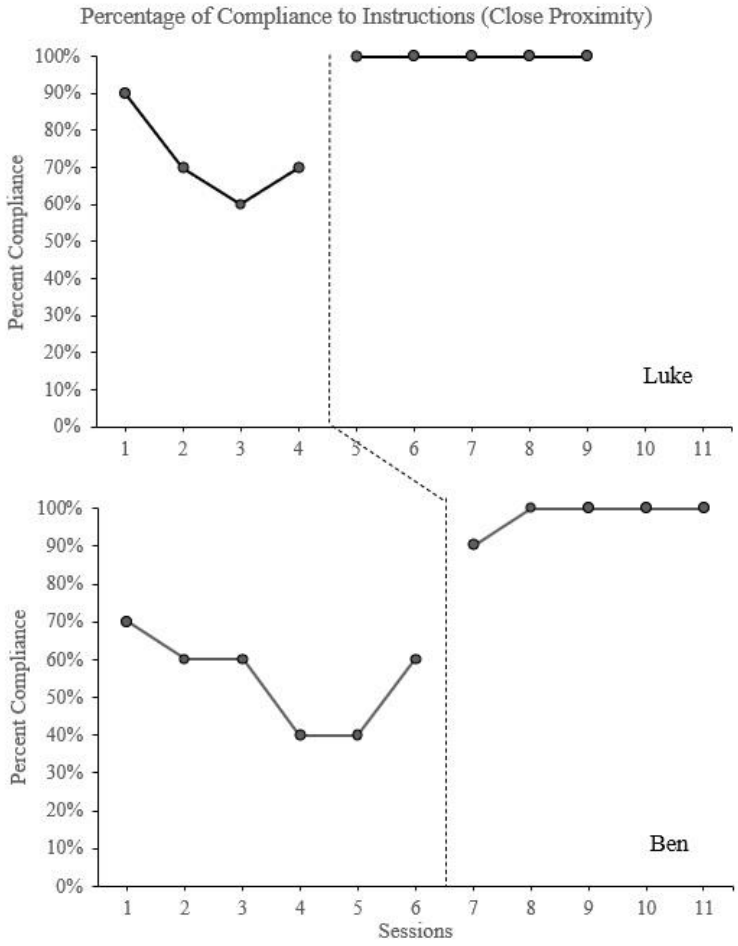
CHAPTER III – RESULTS

Student Compliance to Initial Instruction

Close Proximity Participants

The percentage of student compliance to teacher's initial instruction for each student participant is displayed in Figures 1 and 2. Luke complied with an average of 72.5% (*SD* = 12.58, range = 60%-90%) of his teacher's initial instructions during baseline. Following implementation of EID procedures with close proximity, an immediate increase in compliance was observed. Luke complied with 100% of his teacher's initial instruction during the EID intervention phase. Ben complied with an average of 55% (*SD* = 12.25, range = 40%-70%) of his teacher's initial instructions during baseline. Following implementation of EID procedures with close proximity, an immediate increase in compliance was observed. Ben complied with an average of 98% (*SD* = 4.47, range = 90%-100%) of his teacher's initial instruction during the EID intervention phase.

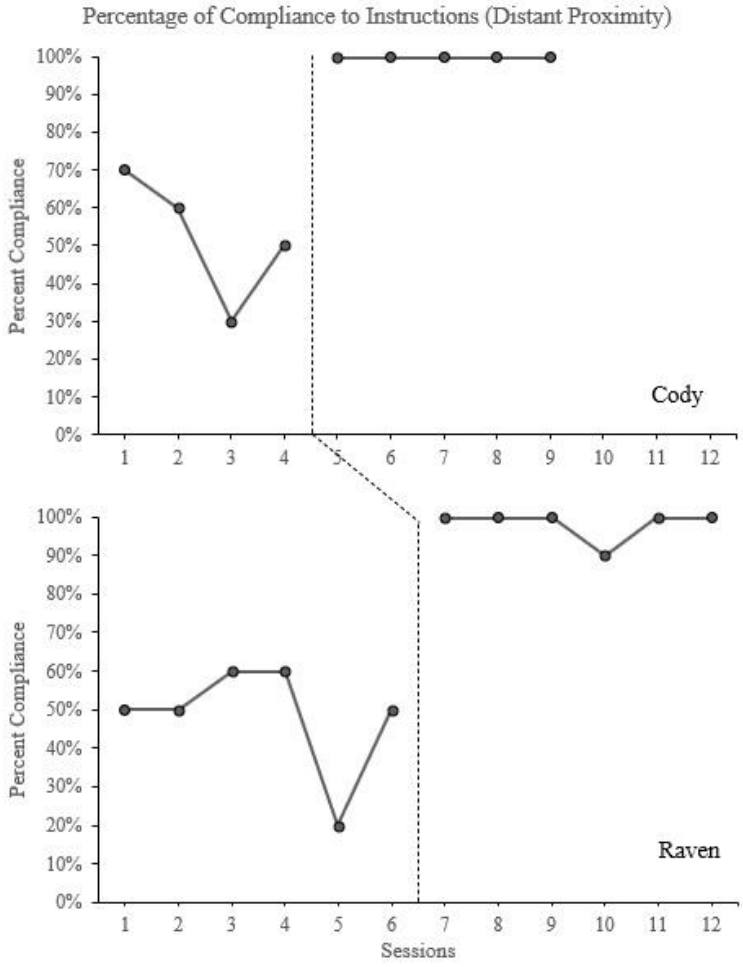
Figure 1. Student Compliance to Initial Instruction (Close Proximity)



Distant Proximity Participants

Cody complied with an average of 52.5% (*SD* = 17.08, range = 30%-70%) of his teacher's initial instructions during baseline. Following implementation of EID procedures with distant proximity, an immediate increase in compliance was observed. Cody complied with an average of 100% of his teacher's initial instruction during the EID intervention phase. Raven complied with an average of 48.33% (*SD* = 14.72, range = 20%-60%) of her teacher's initial instructions during baseline. Following implementation of EID procedures with distant proximity, an immediate increase in compliance was observed. Raven complied with an average of 98.33% (*SD* = 4.08, range = 90%-100%) of her teacher's initial instruction during the EID intervention phase. Anecdotally, Cody's teacher tended to deliver instructions approximately 5 to 10 ft from him, and Raven's teacher tended to deliver instructions approximately 5 to 15 ft from her.

Figure 2. Student Compliance to Initial Instruction (Distant Proximity)



Student Behavior (AEB & DB)

The percentage of AEB and DB for each student participant is displayed in Table 2. Following the implementation of EID procedures with close and distant proximity, an immediate increase in AEB and immediate decrease in DB were observed. Students maintained high levels of AEB and low levels of DB following intervention, with no overlapping data between baseline and EID conditions.

Table 2. *Percentage of Student Behavior (AEB & DB)*

Student	**Behaviors**	**Baseline Mean (*SD*)**	**EID Mean (*SD*)**
Luke (*Close*)	AEB	63.75% (14.98)	96.17% (3.89)
	DB	36.25% (14.98)	6% (5.08)
Ben (*Close*)	AEB	64.21% (7.31)	84.99% (4.46)
	DB	35.79% (7.31)	18.07% (5.05)
Cody (*Distant*)	AEB	27.41% (8.16)	84% (4.77)
	DB	72.59% (8.16)	22.33% (5.12)
Raven (*Distant*)	AEB	48.54% (14.28)	87.3% (7.15)
	DB	51.6% (14.25)	15.97% (7.16)

Effect Size Calculations

Tau-U effect sizes are presented in Table 3. Effect sizes were calculated by comparing baseline levels of student compliance to initial instruction, AEB, and DB to levels in the EID intervention condition. Overall, Tau-U effect size scores indicated very large effect sizes for student compliance to initial instruction, AEB, and DB across student participants.

Table 3. *Tau-U Scores for Compliance to Initial Instruction, AEB, and DB*

Student Behaviors		Baseline to EID	
		Tau-U Score	Effect
Luke			
	Compliance to Initial Instruction	1.00	Very Large
	AEB	1.00	Very Large
	DB	-1.00	Very Large
Ben			
	Compliance to Initial Instruction	1.00	Very Large
	AEB	1.00	Very Large
	DB	-1.00	Very Large
Cody			
	Compliance to Initial Instruction	1.00	Very Large
	AEB	1.00	Very Large
	DB	-1.00	Very Large
Raven			
	Compliance to Initial Instruction	1.00	Very Large
	AEB	1.00	Very Large
	DB	-1.00	Very Large

Treatment Integrity

Percentage of teachers' adherence to the EID intervention procedures and the assigned distant component (i.e., close vs. distant) are displayed in Table 4. All four teachers exhibited low usage of EID components during baseline. During the EID intervention phases, all four teachers adhered to EID components 76.41% on average when delivering instructions with EID procedures. Teachers 1, 3, and 4 displayed low usage to the first two components of the EID procedure: demanded eye contact (*M* range=12.78%-48%) and delivering behavior specific praise contingent on demanded eye contact (*M* range=8.33%-22%). Adherence to the assigned proximity condition was high across teacher participants (range=70%-100%), as shown in Table 4.

Table 4. *Teacher Treatment Integrity*

Teacher Treatment Integrity Data	Baseline Mean (Range)	EID Mean (Range)
Teacher 1 (Luke)		
Percentage of EID Components	24.29% (18.57-34.29)	72% (61.43-84.29)
Proximity (Close Proximity)	65% (70-90)	98% (90-100)
Teacher 2 (Ben)		
Percentage of EID Components	29.29% (15.71-40)	83.37% (81.16-88.57)
Proximity (Close Proximity)	71.67% (60-90)	96% (90-100)
Teacher 3 (Cody)		
Percentage of EID Components	30% (25.71-32.86)	73.63% (61.54-85.25)
Proximity (Distant Proximity)	70% (60-80)	88% (70-100)
Teacher 4 (Raven)		
Percentage of EID Components	30.91% (18.57-44.29)	76.65% (68.57-83.61)
Proximity (Distant Proximity)	78.33% (60-90)	90% (80-100)

Social Validity

Teachers completed the URP-IR at the end of the intervention condition to assess for treatment acceptability and feasibility, as displayed in Table 5. Luke and Ben's teachers rated high levels of acceptability (*M*=5.44), understanding (*M*=5.17), and feasibility (*M*=5.5) for the EID with close proximity intervention. Cody and Raven's teachers rated high levels of acceptability (*M*=5.39), understanding (*M*=5.67), and feasibility (*M*=5.5) for the EID with distant proximity intervention. Overall, teachers in both close and distant proximity conditions rated EID as an acceptable (*M*=5.42) and feasible (*M*=5.5) intervention, and endorsed understanding the intervention (*M*=5.42).

Table 5. *Teacher Social Validity*

Teacher Participant	***Acceptability*** ***M (SD)***	***Understanding*** ***M (SD)***	***Feasibility*** ***M (SD)***
Close Proximity			
Luke's Teacher	5 (0)	5 (0)	5 (0)
Ben's Teacher	5.89 (0.33)	5.33 (0.58)	6 (0)
Distant Proximity			
Cody's Teacher	4.78 (1.56)	5.67 (0.58)	5.17 (0.41)
Raven's Teacher	6 (0)	5.67 (0.58)	5.83 (0.41)

CHAPTER IV – DISCUSSION

The primary purpose of the current study was to examine the contributions of proximity to EID when used by teachers with students in classroom settings. It was hypothesized that students assigned to the close proximity condition would demonstrate higher levels of compliance and student behavior than students assigned to the distant proximity condition. When EID was implemented in close or distant proximity to the student, an immediate increase in student compliance to initial instruction, an increase in AEB, and an immediate decrease in DB was observed across all participants. The positive findings and very large effect values of the current study are consistent with Derieux's (2021) systematic review that reported small to large effect sizes for studies that utilized EID procedures, and with previous research that demonstrated EID as an effective strategy for addressing child noncompliance (Bellipanni et al., 2013; Derieux, 2021; Ford et al., 2001; Griffin, 2007; Wimberly, 2016). Results also suggest that EID, in both close and distant proximity to the student, is an effective teacher-delivered strategy for addressing low levels of student compliance in classroom settings.

Additionally, this study aimed to address the shortcomings of Griffin's (2007) study, with an emphasis on maintaining high levels of treatment integrity regarding the distant proximity component. Griffin exhibited low adherence to the proximity component in distant proximity conditions, ranging from 14% to 49%, whereas the current study maintained high levels of adherence to the proximity component in distant conditions, ranging from 70% to 100%. It should be noted that Griffin's study utilized parents to deliver instructions and recruited child participants that exhibited baseline levels of compliance below 40%. In the current study, EID procedures were delivered by

teachers in a school setting and the baseline level of compliance cross all student participants was 57.08% on average. These factors may have contributed to the conflicting results.

The first research question evaluated whether the implementation of EID in close proximity (i.e., within 3 ft) has an effect on student compliance levels in a classroom setting. Luke and Ben demonstrated an immediate increase in compliance to initial teacher instruction from baseline levels following implementation of EID procedures with close proximity. The second research question evaluated whether the implementation of EID in distant proximity increases student compliance levels in a classroom setting. Cody and Raven demonstrated an immediate increase in compliance to initial teacher instruction from baseline levels following implementation of EID procedures with distant proximity.

The third and fourth research questions evaluated whether the implementation of EID in close and distant proximity, respectively, increases student levels of AEB in a classroom setting. An immediate increase in AEB from baseline levels was observed following the implementation of EID in both proximity conditions. The fifth and sixth research questions evaluated whether the implementation of EID in close and distant proximity, respectively, decreases student levels of DB in a classroom setting. An immediate decrease from baseline levels in DB was observed following the implementation of EID in both proximity conditions. The last research question evaluated whether teacher participants report the implementation of EID as a socially valid intervention. Teachers endorsed EID as an acceptable and feasible intervention in the current study.

Limitations and Future Directions

There are several limitations to be noted with the current study. First, Student 1, Luke, was included as a participant in the study despite exhibiting baseline levels of compliance to teacher instruction, on average, over 60%. Although Luke's level of compliance and AEB increased and DB decreased with implementation of EID procedures, the relatively high baseline level of compliance may limit the ability to demonstrate a functional relationship between treatment effects and the implementation of EID procedures. Second, the baseline conditions for Luke and Cody do not contain a minimum of five data points, which does not meet What Works Clearinghouse (WWC) standards for a multiple baseline design (Kratochwill et al., 2022). Future research may consider replicating the current study while adhering to WWC design standards for single case research.

Third, three of the teacher participants required retraining due to exhibiting adherence levels to EID procedures below 80% during intervention phases. These levels of adherence were observed despite the principal investigator retraining before the next session after each intervention session in which treatment integrity fell below 80%. Future research may consider modifying training procedures, such as the additional in-vivo modeling, to increase adherence to EID procedures. Fourth, teacher participants were informed of what proximity condition they were assigned and were instructed by the principal investigator once before the first baseline observation to attempt to deliver instructions in the assigned proximity when possible. This prompt may have affected instruction delivery for teacher participants during baseline. Future research may consider not implementing this procedure, as this procedure may have affected whether baseline

instructions reflected teacher participants' typical instruction delivery before the implementation of EID procedures.

Conclusion

The current study found that EID in close and distant proximity can lead to positive student behavioral outcomes in the classroom. These findings add to the compliance training literature by examining the contributions of proximity to instruction delivery. The current findings are contrary to Griffin's (2007) study which found variable results for EID delivered in distant proximity in the clinical setting. Future research may be necessary to determine whether these results generalize to other student populations and school settings. Given the average treatment integrity for EID procedures was below 80% for three of the teacher participants, additional research is important to evaluate the contributions of other components to the EID procedure. This determination would be particularly important as the current study found positive treatment effects despite particularly low adherence to the EID components of demanded eye contact and delivering behavior specific praise contingent on demanded eye contact for three of the four teacher participants. Despite three of the teachers exhibiting levels of adherence to the EID procedure below 80%, all teachers demonstrated a high level of adherence to the proximity component of the EID procedure, which directly addresses a limitation of the Griffin (2007) study. Overall, the results of this study indicate that close proximity, a standard component of EID procedures since Ford et al. (2001), may not be necessary for positive behavioral outcomes when utilizing EID procedures in the school settings. Future research is warranted to replicate the positive outcomes of the current study and to conduct additional investigations on the contributions of proximity to the EID procedure.

APPENDIX A – USM Institutional Review Board Approval Form

Office *of*
Research Integrity

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

118 COLLEGE DRIVE #5116 • HATTIESBURG, MS | 601.266.6756 | WWW.USM.EDU/ORI

NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI via the Incident submission on InfoEd IRB.
- The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.

PROTOCOL NUMBER:	22-1576
PROJECT TITLE:	Assessing the Contributions of Proximity to Effective Instruction Delivery
SCHOOL/PROGRAM	School of Psychology
RESEARCHERS:	PI: Kenneth Ross Investigators: Ross, Kenneth~Olmi, D~
IRB COMMITTEE ACTION:	Approved
CATEGORY:	Expedited Category
PERIOD OF APPROVAL:	27-Jan-2023 to 26-Jan-2024

Donald Sacco, Ph.D.
Institutional Review Board Chairperson

APPENDIX B – Parental Consent Form

PARENT/GUARDIAN CONSENT FORM		
Today's date:		
PROJECT INFORMATION		
Project Title: Assessing the Contributions of Proximity to Effective Instruction Delivery		
Principal Investigator: Kenneth Ross II	Phone Number: 985-201-3681	Email: Kenneth.j.ross@usm.edu
College: Education and Human Sciences	School and Program: School of Psychology, School Psychology	

RESEARCH DESCRIPTION

1. **Purpose:**

The current study aims to assess how proximity, or distance from a child, contributes to effective instruction delivery, a component of the Compliance Training for Children (CTC) Model developed by D. Joe Olmi from the School Psychology program at the University of Southern Mississippi. Effective instruction delivery is designed to increase childhood compliance to adult-delivered directives. Additionally, the current study aims to access the effectiveness of effective instruction delivery on increasing on-task behavior and decreasing off-task behavior.

2. **Description of Study:**

Four student-teacher pairs will be recruited based on referrals by teachers or administrators for demonstrating low levels of compliance to teacher instructions. The principal investigator will train teachers on effective instruction delivery and will re-train the teacher if they begin to display low treatment integrity (i.e., the teacher is not implementing the intervention as intended) at any point during the study. Teachers will be randomly assigned to implement effective instruction delivery at a close proximity (i.e., within 3 feet) from the student or at a distant proximity (i.e., 5 feet or more) from the student. A doctoral-level graduate student from The University of Southern Mississippi will observe the teacher providing instructions to your student during 20-minute observation periods.

Important to Note:
This type of intervention is consistent with behavioral consultation that is regularly conducted with teachers in schools and will not interfere with typical classroom instruction. Your student will not be required to engage in additional work other than complying with teacher instructions. Your student will not be pulled out of class for the study.

3. **Benefits**

Potential benefits include increased student compliance, increased academically engaged behavior, and decreased disruptive behavior. This study may also provide teachers with an additional classroom behavior management strategy to improve student compliance in the classroom.

4. Risks

There are few risks associated with participating in the current study. Your student's behaviors will be observed throughout the duration of the study. Procedures will be modified or terminated if unexpected negative effects are to arise during participation in the study (i.e., your student begins engage in an increased level of disruptive behavior). Your student may feel a degree of discomfort, as observers and their teachers are monitoring their behavior more closely. Your student may feel that they are being targeted or singled out, as they may be the only student that the teacher utilizes effective instruction delivery with.

5. Confidentiality

All information obtained during this research study (i.e., interviews, observations, integrity checklists) will be kept strictly confidential. All identifying information, such the names of the teachers and students, will not be disclosed to any individual who is not connected with the current research study. All identifying information shall be removed in the event that the results of this research project are published by academic journals or presented at professional conferences.

6. Alternative Procedures

Should you decide to withdraw your student from the current research study, alternative behavioral management strategies will be provided to the teacher in order to improve the behavior of your student.

7. Participant's Assurance

This project has been reviewed by the Institutional Review Board (IRB-22-1576), which ensures that research projects involving human subjects follow federal regulations.

Any questions or concerns about rights as a research participant should be directed to the Manager of the IRB at 601-266-5997. Participation in this project is completely voluntary, and participants may withdraw from this study at any time without penalty, prejudice, or loss of benefits.

Any questions about the research should be directed to Kenneth Ross (985-201-3681; Kenneth.j.ross@usm.edu) or Dr. Joe Olmi (601-266-5693; d.olmi@usm.edu).

PARENTAL CONSENT INFORMATION	
Participant's Name:	Participant's Age:
Parent or Guardian's Name:	
Person Soliciting Parental Consent:	

AGREEMENT TO ALLOW PARTICIPATION IN RESEARCH

Consent is hereby given to participate in this research project. All procedures and/or investigations to be followed and their purpose, including any experimental procedures, were explained. Information was given about all benefits, risks, inconveniences, or discomforts that might be expected.

The opportunity to ask questions regarding the research and procedures was given. Participation in the project is completely voluntary, and participants may withdraw at any time without penalty, prejudice, or loss of benefits. All personal information is strictly confidential, and no names will be disclosed. Any new information that develops during the project will be provided if that information may affect the willingness to continue participation in the project.

Questions concerning the research, at any time during or after the project, should be directed to Kenneth Ross (985-201-3681; Kenneth.j.ross@usm.edu) or Dr. Joe Olmi (601-266-5693; d.olmi@usm.edu). This project and this consent form have been reviewed by the Institutional Education Board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5125, Hattiesburg, MS, 39406-001, 601-266-5997.

_____
Parent or Guardian of Research Participant

_____
Date

_____
Person Explaining the Study

_____
Date

APPENDIX C – Teacher Consent Form

TEACHER CONSENT FORM		
Today's date:		
PROJECT INFORMATION		
Project Title: Assessing the Contributions of Proximity to Effective Instruction Delivery		
Principal Investigator: Kenneth Ross II	Phone Number: 985-201-3681	Email: Kenneth.j.ross@usm.edu
College: Education and Human Sciences	School and Program: School of Psychology, School Psychology	

RESEARCH DESCRIPTION

1. **Purpose:**

The current study aims to assess how proximity, or distance from a child, contributes to effective instruction delivery, a component of the Compliance Training for Children (CTC) Model developed by D. Joe Olmi from the School Psychology program at the University of Southern Mississippi. Effective instruction delivery is designed to increase childhood compliance to adult-delivered directives. Additionally, the current study aims to access the effectiveness of effective instruction delivery on increasing on-task behavior and decreasing off-task behavior.

2. **Description of Study:**

Four student-teacher pairs will be recruited based on referrals by teachers or administrators for demonstrating low levels of compliance to teacher instructions. The principal investigator will train teachers on effective instruction delivery and will re-train the teacher if they begin to display low treatment integrity (i.e., the teacher is not implementing the intervention as intended) at any point during the study. Teachers will be randomly assigned to implement effective instruction delivery at a close proximity (i.e., within 3 feet) from the student or at a distant proximity (i.e., 5 feet or more) from the student. A doctoral-level graduate student from The University of Southern Mississippi will observe the teacher providing instructions to the student during 20-minute observation periods.

Important to Note:
This type of intervention is consistent with behavioral consultation that is regularly conducted with teachers in schools and will not interfere with typical classroom instruction. The student will not be required to engage in additional work other than complying with teacher instructions. The student will not be pulled out of class for the study.

3. **Benefits**

Potential benefits include increased student compliance, increased academically engaged behavior, and decreased disruptive behavior. This study may also provide teachers with an additional classroom behavior management strategy to improve student compliance in the classroom.

4. Risks

There are few risks associated with participating in the current study. The student's behaviors will be observed throughout the duration of the study. Procedures will be modified or terminated if unexpected negative effects are to arise during participation in the study (i.e., the student begins engage in an increased level of disruptive behavior). The student may feel a degree of discomfort, as observers and their teachers are monitoring their behavior more closely. The student may feel that they are being targeted or singled out, as they may be the only student that the teacher utilizes effective instruction delivery with.

5. Confidentiality

All information obtained during this research study (i.e., interviews, observations, integrity checklists) will be kept strictly confidential. All identifying information, such the names of the teachers and students, will not be disclosed to any individual who is not connected with the current research study. All identifying information shall be removed in the event that the results of this research project are published by academic journals or presented at professional conferences.

6. Alternative Procedures

Should you decide to withdraw your consent from the current research study, alternative behavioral management strategies will be provided to you in order to improve the behavior of the student.

7. Participant's Assurance

This project has been reviewed by the Institutional Review Board (IRB-22-1576), which ensures that research projects involving human subjects follow federal regulations.

Any questions or concerns about rights as a research participant should be directed to the Manager of the IRB at 601-266-5997. Participation in this project is completely voluntary, and participants may withdraw from this study at any time without penalty, prejudice, or loss of benefits.

Any questions about the research should be directed to Kenneth Ross (985-201-3681; Kenneth.j.ross@usm.edu) or Dr. Joe Olmi (601-266-5693; d.olmi@usm.edu).

TEACHER CONSENT INFORMATION	
Teacher's Name:	Grade:
Name of Participating School District:	
Name of Participating School:	
Person Soliciting Teacher Consent:	

AGREEMENT TO ALLOW PARTICIPATION IN RESEARCH

Consent is hereby given to participate in this research project. All procedures and/or investigations to be followed and their purpose, including any experimental procedures, were explained. Information was given about all benefits, risks, inconveniences, or discomforts that might be expected.

The opportunity to ask questions regarding the research and procedures was given. Participation in the project is completely voluntary, and participants may withdraw at any time without penalty, prejudice, or loss of benefits. All personal information is strictly confidential, and no names will be disclosed. Any new information that develops during the project will be provided if that information may affect the willingness to continue participation in the project.

Questions concerning the research, at any time during or after the project, should be directed to Kenneth Ross (985-201-3681; Kenneth.j.ross@usm.edu) or Dr. Joe Olmi (601-266-5693; d.olmi@usm.edu). This project and this consent form have been reviewed by the Institutional Education Board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5125, Hattiesburg, MS, 39406-001, 601-266-5997.

_____
Teacher Name

_____
Date

_____
Person Explaining the Study

_____
Date

APPENDIX D – EID (Close Proximity) Intervention Protocol

1. Ensure that you are in close to the student (i.e., within 3 feet) before delivering the instruction.
2. Use an appropriate tone of voice given the distance of instruction delivery. For example, instructions delivered in close proximity to the student should be given in a quiet tone of voice.
3. Instruct the student to initiate eye contact before delivering the instruction. Examples include saying, “John, look at me” and “Hey, look at me and listen.”
4. Praise the student for initiating eye contact. Examples include, “Thank you for looking” and “Thanks for paying attention.”
5. Deliver instruction to the student using descriptive terms. Descriptive terminology communicates behavioral expectations to the student (i.e., if the student needs to open a specific document on Google Classroom, indicate to the student the need for them to open that specific document in your instruction).
6. Deliver instructions in a directive format that indicates a distinct outcome. An example of a direct and distinct instruction is, “John, take out your Chromebook and complete today’s bell work assignment.” A nonexample is “John, do your work.”
7. Allow a 5-second wait period for the student to engage in the instruction. Do not repeat the instruction until a 5-second wait period for the student to respond has elapsed.
8. Provide the student with behavior specific praise contingent on compliance with instruction (i.e., “Thank you John for taking out your Chromebook”).

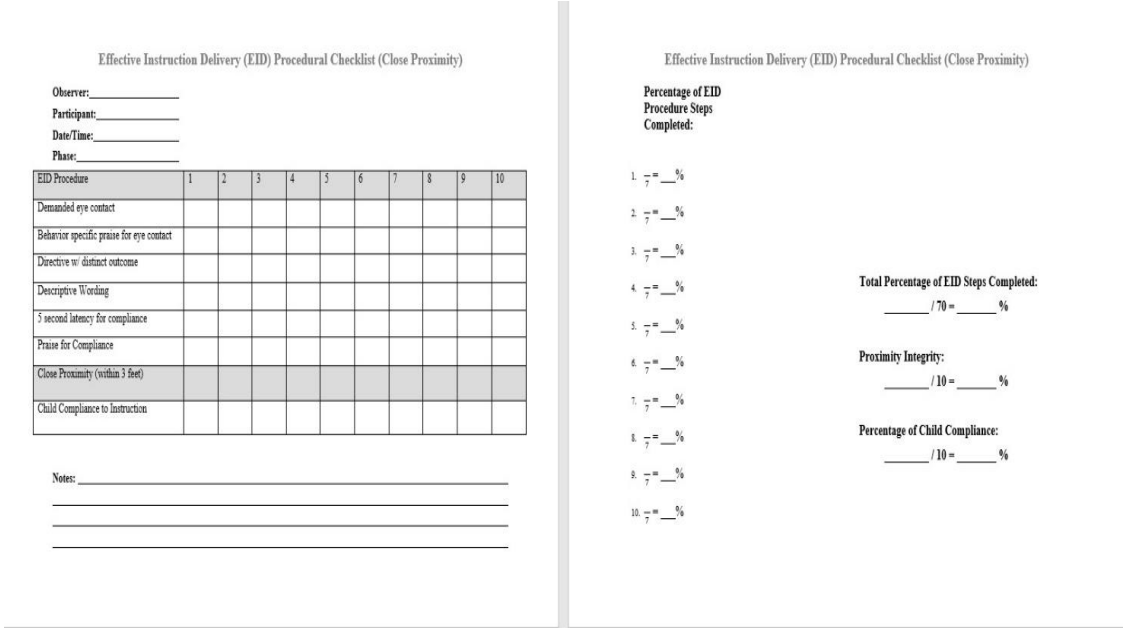
Adapted and Modified from Ford et al., 2001

APPENDIX E – EID (Distant Proximity) Intervention Protocol

1. Ensure that you are distant from the student (i.e., 5 feet or more) before delivering the instruction.
2. Use an appropriate tone of voice given the distance of instruction delivery and the present volume of the classroom.
3. Instruct the student to initiate eye contact before delivering the instruction. Examples include saying, “John, look at me” and “Hey, look at me and listen.”
4. Praise the student for initiating eye contact. Examples include, “Thank you for looking” and “Thanks for paying attention.”
5. Deliver instruction to the student using descriptive terms. Descriptive terminology communicates behavioral expectations to the student (i.e., if the student needs to open a specific document on Google Classroom, indicate to the student the need for them to open that specific document in your instruction).
6. Deliver instructions in a directive format that indicates a distinct outcome. An example of a direct and distinct instruction is, “John, take out your Chromebook and complete today’s bell work assignment.” A nonexample is “John, do your work.”
7. Allow a 5-second wait period for the student to engage in the instruction. Do not repeat the instruction until a 5-second wait period for the student to respond has elapsed.
8. Provide the student with behavior specific praise contingent on compliance with instruction (i.e., “Thank you John for taking out your Chromebook”).

Adapted and Modified from Ford et al., 2001

APPENDIX F – EID Procedural Integrity Form (Close Proximity)



Effective Instruction Delivery (EID) Procedural Checklist (Close Proximity)

Observer:_____
Participant:_____
Date/Time:_____
Phase:_____

EID Procedure	1	2	3	4	5	6	7	8	9	10
Demanded eye contact										
Behavior specific praise for eye contact										
Directive w/ distinct outcome										
Descriptive Wording										
5 second latency for compliance										
Praise for Compliance										
Close Proximity (within 3 feet)										
Child Compliance to Instruction										

Notes: _____

Effective Instruction Delivery (EID) Procedural Checklist (Close Proximity)

Percentage of EID Procedure Steps Completed:

1. $\frac{}{7}$ = __%
2. $\frac{}{7}$ = __%
3. $\frac{}{7}$ = __%
4. $\frac{}{7}$ = __%
5. $\frac{}{7}$ = __%
6. $\frac{}{7}$ = __%
7. $\frac{}{7}$ = __%
8. $\frac{}{7}$ = __%
9. $\frac{}{7}$ = __%
10. $\frac{}{7}$ = __%

Total Percentage of EID Steps Completed:
_____ / 70 = _____ %

Proximity Integrity:
_____ / 10 = _____ %

Percentage of Child Compliance:
_____ / 10 = _____ %

APPENDIX G – EID Procedural Integrity Form (Distant Proximity)

Effective Instruction Delivery (EID) Procedural Checklist (Distant Proximity)

Observer:_____
Participant:_____
Date/Time:_____
Phase:_____

EID Procedure	1	2	3	4	5	6	7	8	9	10
Demanded eye contact										
Behavior specific praise for eye contact										
Directive w/ distinct outcome										
Descriptive Wording										
5 second latency for compliance										
Praise for Compliance										
Distant Proximity (5 feet or more)										
Child Compliance to Instruction										

Notes: _____

Effective Instruction Delivery (EID) Procedural Checklist (Distant Proximity)

Percentage of EID Procedure Steps Completed:

1. $\frac{}{7}$ = __%
2. $\frac{}{7}$ = __%
3. $\frac{}{7}$ = __%
4. $\frac{}{7}$ = __%
5. $\frac{}{7}$ = __%
6. $\frac{}{7}$ = __%
7. $\frac{}{7}$ = __%
8. $\frac{}{7}$ = __%
9. $\frac{}{7}$ = __%
10. $\frac{}{7}$ = __%

Total Percentage of EID Steps Completed:
_____ / 70 = _____ %

Proximity Integrity:
_____ / 10 = _____ %

Percentage of Child Compliance:
_____ / 10 = _____ %

APPENDIX H – Student Behavior Observation

Participant: Phase: Date: Observer:

	AEB	DB		AEB	DB		AEB	DB
1.1			7.5			14.3		
1.2			7.6			14.4		
1.3			8.1			14.5		
1.4			8.2			14.6		
1.5			8.3			15.1		
1.6			8.4			15.2		
2.1			8.5			15.3		
2.2			8.6			15.4		
2.3			9.1			15.5		
2.4			9.2			15.6		
2.5			9.3			16.1		
2.6			9.4			16.2		
3.1			9.5			16.3		
3.2			9.6			16.4		
3.3			10.1			16.5		
3.4			10.2			16.6		
3.5			10.3			17.1		
3.6			10.4			17.2		
4.1			10.5			17.3		
4.2			10.6			17.4		
4.3			11.1			17.5		
4.4			11.2			17.6		
4.5			11.3			18.1		
4.6			11.4			18.2		
5.1			11.5			18.3		
5.2			11.6			18.4		
5.3			12.1			18.5		
5.4			12.2			18.6		
5.5			12.3			19.1		
5.6			12.4			19.2		
6.1			12.5			19.3		
6.2			12.6			19.4		
6.3			13.1			19.5		
6.4			13.2			19.6		
6.5			13.3			20.1		
6.6			13.4			20.2		
7.1			13.5			20.3		
7.2			13.6			20.4		
7.3			14.1			20.5		
7.4			14.2			20.6		

Target Student

AEB: ___/120=____

DB: ___/120=____

IOA (Target)

AEB: ___/120=____

DB: ___/120=____

AEB: Passive or actively on-task, Ex. Looking at teacher or assignment, writing, reading class material, raising hand (students may sit on legs, but shoulders should be oriented towards teacher/assignment)

DB: Disruptive behaviors including out of seat without permission, playing with objects inconsistent with class instruction (games on Chromebook, playing with pencil, throwing objects, talking out of turn, using cell phone, headphones, digging in backpack, playing with hair, sleeping, staring off)

APPENDIX I – Teacher Training Procedural Integrity Checklist

Teacher Training Procedural Integrity Checklist

Observer:_____

Participant:_____

Date/Time:_____

Phase:_____

	Teacher Training Procedure	Completed	Not Completed
1	Provided a copy of the appropriate EID Procedure Guideline form (i.e., close vs distant)		
2	Provided verbal instruction on the components of the EID procedure		
3	Selected an object in classroom (e.g., a student's desk or classroom table) for the teacher to utilize as a physical prompt to indicate that they are in close or distant proximity of the participating student's area		
4	Modeled the individual components of the EID procedure		
5	Instructed the teacher to deliver the components of the EID procedure to the trainer as if they were the participating student		
6	Provided performance feedback to the teacher based on their delivery of the components of the EID procedure		

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